Course Information Form (CIF)

Course Code: CSC 188

Course Title: 3D Computer Animation II

Department: Business/Computer Science and Technologies
Effective Date: Summer 2026
PCS Code: 1.1 - Baccalaureate/Transfer
CIP Code: 10.0304
Repeatability: 0

Credit Hours

Catalog Notation: 3-2-4
Credit Hour Distribution:

Lecture: 3	Lab: 2	Clinical: 0	**Total: 4**

General Course Information

Catalog Description

Intermediate topics in 3D animation and cinematography for 3D applications including gaming, film, visual effects, virtual and augmented reality, and related disciplines.

General Course Objectives

Equip students with the fundamental knowledge and skills in creating 3D computer-generated animation and content for digital media areas including gaming, film, and interactive applications.
Become proficient with techniques in standard professional 3D content creation software packages.
Apply cinematic design considerations in 3D content development.

Minimum Placement Levels

English	Reading	Math
None	None	None

Prerequisites

Credit in CSC 187

Methods of Evaluation

8-10 small-scale studies will be given to introduce and develop the student's understanding and proficiency of course concepts and skills. 4-5 large-scale projects will be regularly assigned to apply the concepts introduced in the studies. Project assignments form the basis of the student's portfolio work in 3D computer animation.

Instructional Materials and Additional Supplies

Taught in lab environment with specialized software and hardware. Regular upgrades of software and hardware expected annually.
Students are required to have a USB flash drive.

Course Content

General Learning Outcomes (GLOs)

- Creativity and Innovative Thinking: Students will design, present, and interpret materials, information, and ideas in innovative ways.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Class Introduction and Film Screening	1. Identify course requirements and expectations; use lab accounts.	2	2	0
Film Lighting	1. Describe film lighting techniques for 3D digital environments. 2. Apply film lighting techniques for 3D digital environments.	3	2	0
Motion Fundamentals	1. Summarize fundamentals of describing and creation of motion. 2. Describe fundamentals of describing and creation of motion.	2	2	0
Key-frame Animation	1. Describe techniques for creating and editing key-frame animation. 2. Apply techniques for creating and editing key-frame animation.	2	2	0
Modifying Key Positions	1. Describe techniques for creating and modifying key-frame positions. 2. Apply techniques for creating and modifying key-frame positions.	2	2	0
Modifying Graph Shape	1. Describe techniques for creating and modifying animation graph shapes. 2. Apply techniques for creating and modifying animation graph shapes.	2	2	0
Grouping Nodes for Animation	1. Describe techniques for creating and modifying group nodes for multiple animations on a single channel. 2. Apply techniques for creating and modifying group nodes for multiple animations on a single channel. 3. Understand application of group nodes to create complex animations on a single channel.	4	2	0
Camera Effects	1. Describe techniques for creating cinematic camera effects. 2. Apply techniques for creating cinematic camera effects.	2	2	0
Rendering for Animation	1. Describe techniques for rendering a series of frames for animation sequences. 2. Apply techniques for rendering a series of frames for animation sequences.	2	2	0
Story Development	1. Describe pre-production methods including story concept, boards, and 3D layout. 2. Apply pre-production methods including story concept, boards, and 3D layout.	4	2	0
Camera Cinematography	1. Describe principles of cinematography for camera composition and dynamics. 2. Apply principles of cinematography for camera composition and dynamics.	4	2	0
Principles of Animation	1. Summarize traditional principles of animation applied in a 3D environment. 2. Apply traditional principles of animation applied in a 3D environment.	4	2	0
Non-linear Deformation	1. Describe non-linear deformation techniques for animation. 2. Apply non-linear deformation techniques for animation.	4	2	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Lattice Deformation	1. Describe lattice deformation techniques for animation. 2. Apply lattice deformation techniques for animation.	4	2	0
Composition	1. Describe techniques for producing final compositions with multiple animation sequences and sound. 2. Apply techniques for producing final compositions with multiple animation sequences and sound.	4	2	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	30	0